High Performance Buildings

'All applicable facilities at Fort Carson will be high-performance buildings that meet or surpass the Platinum Standard of LEED by 2027'

Garrison Commander's Sustainability Breakfast

Fort Carson, Colorado
14 June 2006

Recent Successes

Barracks renovations

'GOLD' Clubhouse

Policy and Guidance

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY
INSTALLATIONS AND ENVIRONMENT
110 ARMY PENTAGON
WASHINGTON DC 20310-0110

05 JAN 2006

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Sustainable Design and Development Policy Update – SPiRiT to LEED Transition

1. The purpose of this memorandum is to update the Army Strategy for integrating the principles and practices of sustainability on our installations as we minimize the impacts and total ownership costs of Army systems, material, facilities, and operations. Accordingly, the Army will transition from the Sustainable Project Rating Tool (SPiRiT) to the US Green Building Council [illegible] system effective [illegible].

SPiRiT to LEED (05 Jan 2006)

2. All [illegible]. This construction policy [illegible] such as [illegible] Public Works or the Reserve Component equivalent, supporting Engineer District, designer and constructor will jointly certify the final LEED score and rating.

3. Projects prior to the FY 08 program will continue to use SPiRiT and achieve the GOLD level. Such projects may be scored using LEED NC if the LEED SILVER rating level can be achieved within the program amount. Projects using the design/ build procurement method will include the SPiRiT or LEED assessment in the RFP requirements and achieve the appropriate sustainable rating level in the project.

4. The Army will adopt LEED Homes for scoring residential housing when released by the USGBC. In the meantime, SPiRiT will continue to be used to rate all Army Family Housing new construction projects and homes built under the Residential Communities Initiative. These projects will continue to attain SPiRiT GOLD.

5. It is important that we all continue to emphasize sustainability and incorporate sustainable design and development practices into all facilities built on our installations. This is just one way we are reducing our energy consumption and optimizing life cycle economic performance.

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(Installations and Housing)
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ENGINEERING AND CONSTRUCTION BULLETIN

No. 2006-2 **Issuing Office: CECW-CE** **Issued: 19 May 2006**

Subject: Sustainable Design and Development (SDD)

Applicability: Guidance

1. The purpose of this Engineering and Construction Bulletin (ECB) is to provide implementi guidance on the revised requirements by the Office of the Assistant Secretary of the Army for Installations and Environment on SDD.

2. Starting with the FY08 pro [illegible] ed faciliti are required to be capable of a [illegible] cation at t Silver rating level of Leadersh [illegible] ction (LEED®-NC). LEED®-NC [illegible] by USGBC, www.usgbc.org, and [illegible]

SPiRiT to LEED Implemention Guidance (19 May 2006)

3. This policy includes all M [illegible] s warehouses, with climate cont [illegible] o required to achieve this rating [illegible] rfields, will continue to incorporate S [illegible] mily Housing (AFH) and Residenti [illegible] Sustainable Project Rating To [illegible] cts, SPiRiT prerequisite (paragraph [illegible] ning smoking in the facility is not required to be met.

Goal Vision

The desired end state is that **all buildings** at Fort Carson are **planned, funded, constructed, and maintained according to sustainability principles**. Decisions based on first-cost do not always incorporate sustainable principles; therefore contracting and privatization do not adhere to sustainable principles. This needs to be changed so that sustainability is considered during building/facility design, renovation, construction, and demolition.

Initial Objective

Objective 7.1 Starting in **2007**, all new facilities and major renovations of existing buildings on Fort Carson will be high performance buildings that meet the **Silver standard of LEED**; have a MBTU/ksf/year design energy rating that is **10%** less maximum energy ratings listed in Table II of the Energy Section, IDG; and a water rating of:

- **15** gal/capita/day for bldgs w/o showers and washer
- 40 gal/capita/day for bldgs w/ showers, washers

2015/2027 Objectives with Tar

Objective 7.2: Starting in 2015, all new facilities and major renovations of existing buildings on Fort Carson will be high performance buildings that meet the Gold standard of LEED, have a MBTU/ksf/year design energy rating that is **20%** less maximum energy ratings listed in Table II of Energy Section, IDG; and a water rating of:

- 15 gal/capita/day for bldgs w/o showers and washer/dryers
- 40 gal/capita/day for bldgs w/ showers, washers.

Objective 7.3: Starting in 2027, all new facilities and major renovations of existing buildings on Fort Carson will be high performance buildings that meet the Platinum standard of LEED; have a MBTU/ksf/year design energy rating that is **30%** less maximum energy ratings listed in Table II of Energy Section, IDG; and a water rating of:

- 10 gal/capita/day for bldgs w/o showers and washer/dryers

Challenges

- Sufficient funding to keep sustainable features in projects.
- Changing culture – sustainable ideas becoming second nature
- Customer demands not in line with sustainability
- Leadership support to sustainability

Backup Slides

Initiatives/Measures

Initiative 7.1.1: **Change standard language** in local design documents to reflect an emphasis on sustainability.

Measure: 75% of applicable documents (SABER, IDG, UFGS) updated by 2007; 100% of applicable documents updated by 2008.

Initiative 7.1.2: **Plan and acquire training** on LEED to include cost benefit analysis and life-cycle cost analysis.

Measure: Applicable training requirements incorporated into Individual Development Plans and Fort Carson Training Plans by 2006 and updated annually.

Initiatives/Measures

Initiative 7.1.3: **Change policies** that restrict sustainable design to support and encourage sustainable design.

Measure: 100% of applicable policies identified and changed by 2006; sustainability review and assessment process in place for buildings by 2007.

Initiative 7.1.4: **Work with other sustainability teams** to address principles that crossover to different groups.

Measure: At least one combined meeting per quarter, and ad hoc meetings as appropriate.

Initiatives/Measures

Initiative 7.1.5: **Partner with the U.S. Army Corps** of Engineers to require and encourage sustainable design at the working level.

Measure: COE incorporating sustainable design in at least 100% of Fort Carson projects by 2006.

Initiative 7.1.6: Ensure that engineering division has at least **one LEED accredited professional** on staff.

Measure: LEED accredited person on DPW staff by 2008.

Initiatives/Measures

Initiative 7.1.7: By 2007, all construction/renovation projects are tracked from concept through construction and are 'certified' as to the sustainability level obtained.

Measure: Percentage of completed projects with completed LEED checklist